TITLE 326 AIR POLLUTION CONTROL DIVISION

LSA Document #12-392

SUMMARY/RESPONSE TO COMMENTS RECEIVED AT THE FIRST PUBLIC HEARING

On June 11, 2014, the environmental rules board (board) conducted the first public hearing/board meeting concerning the development of a new rule at 326 IAC 5-1-8. Comments were made by the following parties:

Jodi Perras, on behalf of the Sierra Club Hoosier Chapter (SC)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: Indiana Michigan Power – Rockport Plant, d/b/a American Electric Power (AEP) must demonstrate that Rockport cannot meet the opacity limits during startup and shutdown, and it has not provided this demonstration. AEP does not explain why they cannot take other steps to control opacity and particulate matter, for example, improving maintenance, upgrading the electrostatic precipitators (ESP), or installing additional control equipment. (SC)

Response: Boilers that use fuel oil as a startup fuel and have an ESP as a control device have trouble meeting an opacity limit until the exhaust gases have reached a certain temperature. The ESP cannot be safely engaged until the control device has reached an appropriate temperature. AEP has indicated that they operate the ESP as much as they can to limit the occurrence of exceedances of the opacity limit. Installing additional controls is a major investment and is not warranted in this situation. Adding a baghouse to replace the ESP is the type of project that is required in federal consent decrees or federal rulemaking that affects all power plants. The recent Mercury and Air Toxics Standards (referred to as MATS or Utility NESHAP) will require additional controls and additional particulate matter monitoring for many power plants. Upgrading the ESP does not address the safety issue concerns.

Over the last five years (2009 – 2013), AEP Rockport has a compliance rate of 99.81% based on the Continuous Opacity Monitoring System (COMS) data. This is above the average compliance rate for other sources measuring opacity using a COMS. All opacity exceedances including those attributable to startup and shutdown occurrences are reported to the department as required by AEP Rockport's Title V permit. Only about one third of the reported exceedances were due to startup/shutdown events. IDEM evaluates each reported exceedance and takes the appropriate enforcement action, as necessary. The department has determined that none of the opacity exceedances were significant enough to warrant formal enforcement action, but has issued violation letters to address the deviations.

For comparable sources, IDEM has already addressed this issue; 326 IAC 5-1-3 was amended in 1998 by adding a new subsection (e) to allow sources that had existing startup and shutdown conditions in their construction or operating permits to be exempt from the opacity limit until the exhaust gases achieved a temperature of 250 degrees Fahrenheit at the inlet of the baghouses or ESP. U.S. EPA approved this exemption provision, along with a process for other sources to obtain TAOLs, into Indiana's state implementation plan (SIP) on July 16, 2002. U.S.

EPA approved the limited exemption from opacity limits based on a modeling analysis assessing the worst-case impact showing that the exemption would not jeopardize continued attainment of the particulate matter air quality standard (PM_{10}). IDEM did not model all power plants, but used an example power plant to reflect the worst case dispersion scenario (short stacks). AEP Rockport's units did not have preexisting opacity exemptions in their permits at that time and are not part of the limited exemption in 326 IAC 5-1-3(e). Therefore, AEP Rockport has requested a TAOL for their facility.

Comment: AEP must demonstrate that the temporary alternative opacity limits will not interfere with the maintenance of the National Ambient Air Quality Standards (NAAQS). IDEM's modeling to evaluate impact of this rule on the 24-hour $PM_{2.5}$ NAAQS assumes there is no $PM_{2.5}$ in the air from other sources. (SC)

Response: IDEM does not agree that background concentrations need to be considered because of the nature of the scenario modeled. While the TAOL is limited to just startup and shutdown, the modeling is conservative because emissions were assumed to occur continuously. AEP's modeling analysis estimated PM_{10} emission rates to examine the various operating conditions the unit undergoes during startup. In the early stages the burners are firing oil with the amount of coal being burned steadily increasing. The highest emissions are estimated to occur when the unit has transitioned from oil to coal and under partial load. At this time the ESP is partially energized and AEP assumes an approximate efficiency of 60%. A previous inspector indicated that the ESP is operated at 75% of capability prior to any fire. IDEM's conservative $PM_{2.5}$ modeling analysis assumed all PM_{10} emissions are $PM_{2.5}$ and modeled the highest emission estimate for the startup cycle, assuming it would occur continuously.

U.S. EPA has previously reviewed the modeling and has indicated that the modeling was acceptable. Spencer County is classified as attainment of the particulate matter NAAQS. IDEM is considering running another modeling scenario that takes into account the intermittent nature of these emissions that would include the background concentration. U.S. EPA will be consulted before IDEM runs additional modeling scenarios.

Update: U.S. EPA indicated that any additional modeling conducted would provide additional support for SIP approval with recognition that AEP Rockport has comparable or better dispersion than the other power plants that already have a SIP approved TAOL. IDEM has conducted some preliminary modeling averaging all the different emission rates in the 24 hour start-up period. Including background, the modeled impact is below the standard.

Comment: The temporary alternative opacity limit is too broad to be justifiable. Why is a flat-out exemption needed and justifiable as opposed to a higher opacity limit? Why is it a two-hour exemption? (SC)

Response: There is no opacity limit as part of the TAOL because the structure of the TAOL is time and temperature based. The opacity reading varies during startup and shutdown and the exemption is only applicable during a narrow operating scenario. If an opacity limit was selected that could account for all opacity readings that could happen during this operating scenario, then it would serve little purpose because it would have to be a very high opacity limit. IDEM identified 2 hours as a limit for the exemption based on past COMS data. In the initial Title V permit, IDEM had used four hours for start-up and has further lowered this number as additional COMS data and duration of exceedances during startup were evaluated over the years.

In 326 IAC 5-3-1(e)(2)(A)(i), the TAOL for equipment with baghouses or ESPs applies until the exhaust gas has achieved a temperature of 250 degrees Fahrenheit with no time limit. The proposed TAOL for AEP Rockport provides additional restrictions on time. The proposed TAOL is equivalent (or more stringent) than the TAOLs for other Indiana power plants.

Comment: The documents AEP submitted in support of its request are from 2001 and 2004. They should not be relied upon to demonstrate a need for a temporary alternative opacity limit at Rockport ten years later. (SC)

Response: While the source requested a TAOL in 2001 and 2004 more recent data was evaluated for the rulemaking. IDEM has evaluated COMS data from 2007 to 2013 to confirm that the proposed TAOL in the rulemaking is currently appropriate. IDEM has also conducted additional modeling using updated modeling software.